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B1 *Ortwein*
Claimed

receiving the rail such that a running surface of a head of the received rail lies free, with a bottom of the channel-like recess provided with a first layer of yielding material which extends under a bearing surface of a foot of the rail, with rail side surfaces between the running surface and the bearing surface of the rail covered with a second layer of yielding material, wherein the bottom of the channel-like recess fully supports the rail and side walls of the channel-like recess are parallel

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11. (Amended) The rail track as claimed in claim 8, wherein the second layer has on one side of the rail a different stiffness than on the other side.

REMARKS

The Office Action of September 18, 2000 has been reviewed and the Examiner's comments carefully considered. The present Amendment amends claims 8 and 11 in accordance with the originally filed specification. Claims 8-14 remain in this application.

Claims 8-14 stand rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness. Applicant believes that the above amendments to claims 8 and 11 address the points raised by the Examiner and overcome the indefiniteness rejection. Reconsideration of the rejection under 35 U.S.C. § 112, second paragraph is respectfully requested.

Claims 8-12 and 14 stand rejected under 35 U.S.C. § 102(b) for anticipation by U.S. Patent No. 5,165,598 to Ortwein (hereinafter "the Ortwein patent"). Claims 8, 9 and 13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,513,797 to Lesley (hereinafter "the Lesley patent"). Finally, claim 14 stands rejected under 35 U.S.C. § 103(a) for obviousness over the Lesley patent in view of European Patent Application No. EP 0771908 (hereinafter "the EP Application"). In view of the following remarks, Applicant respectfully requests reconsideration of these rejections.

Independent claim 8 of the present application, as amended, is directed to a rail supported by a non-compressible, concrete base body, with the base body having a channel-like recess for receiving the rail. A running surface of a head of the received rail lies free, while a bottom of the channel-like recess has a first layer of yielding material. This yielding material extends under a bearing surface of a foot of the rail. Rail side surfaces between the running surface and the bearing surface of the rail are covered with a second layer of yielding material. The bottom of the channel-like recess fully supports the rail, and sidewalls of the channel-like recess are parallel to each other.

The Ortwein patent is directed to a resiliently mounted rail for rail vehicles. The Ortwein patent discloses a rail supported by a non-compressible base body, which is steel. The base body of the Ortwein patent comprises a frame, which is formed in two parts, allowing a rail to be mounted between the parts. The running surface of the head of the rail lies free, and the bottom surface of the channel-like recess has a first layer of yielding material extending under the bearing surface of the foot of the rail. The side surfaces of the rails are also covered with a layer of yielding material. As best seen in Fig. 6 of the Ortwein patent, a filler body of non-compressible material may be provided. In addition, the first layer of yielding material and the second layer of yielding material differ in stiffness due to their cross section. Finally, the yielding material of the Ortwein patent is provided to better distribute and absorb the vertical and horizontal loads.

The Lesley patent is directed to a rail track having two parallel rails supported by a non-compressible, concrete base body, with the base body having a channel-like recess for receiving the rails. The running surface for the head of the rail lies free. The underside of the bearing, side surfaces of the rails are covered with a layer of yielding material. Finally, the channel-like recess is filled with a filler body.

The EP Application is directed to a rail construction for a bridge or viaduct. The EP Application discloses two parallel rails supported by a non-compressible base body. The base body has a channel-like recess for receiving the rails. The running surface of the head of the rails lies free, and the bearing surface of the foot of the rail is placed on a plate of sound-dampening material. A compressible filler material fills the channel-like recess. This compressible filler material acts as a yielding material on the sides of the rail, and further improves the noise reduction. An upper side of the base body may be covered with plates of sound-damping material to further reduce sound reduction.

The rail disclosed in the Ortwein patent differs from the invention of the present application in at least three regards. First, independent claim 8, as amended, is directed to a rail that is fully supported by the channel-like recess. As seen in Figs. 1 and 2 of the Ortwein patent, its rail cannot be "fully" supported by the bottom of the channel-like recess due to the geometric shape of the rail. The vehicle and rail load will also be distributed to the sides of the channel-like recess. Second, the sides of the channel-like recess of the Ortwein patent are not parallel to each other, as disclosed in independent claim 8 of the present application. Third, the Ortwein patent discloses a structure having a non-compressible base body. However, the base body of the Ortwein patent is steel and not concrete, as set forth in claim 8. Further, the Ortwein structure is not comparable to the structure of the present application, as the frame disclosed in the Ortwein patent is mounted upon sleepers. The Ortwein patent frame is formed in two parts in order to mount a rail between the parts. Finally, the object of the Ortwein patent structure is to better distribute and support the vertical and horizontal loads of the rail and vehicle, not to dampen the vibrations of the rails as in the present application.

The Lesley patent is also distinguishable from the invention of the present application. As with the Ortwein patent, the rail track disclosed in the Lesley patent does not

disclose a channel-like recess wherein the bottom of the channel-like recess "fully" supports the rail (and vehicle) load. The bearing surfaces of the rail in the Lesley patent are found on the underside of the rail side flanges, not on the underside or base of the rail. In addition, the relatively wide and large upper surface of the rail in the Lesley patent produces significantly more noise than the upper side or surface of the rail of the present application. Although the filler body of the Lesley patent is similar to the filler body disclosed in the present application, the rail track of the Lesley patent lacks the yielding material which maximizes the noise reduction in the rail structure. Further, the Lesley patent structure lacks a sound-dampening material on the upper surface of the base body, as disclosed in claim 14 of the present application.

The EP Application, while disclosing a sound-dampening material on the upper side of the base body, as well as under the bearing surface of the foot of the rail, does not disclose a sound-dampening material on the side surfaces of the rail between the running surface and the bearing surface. In addition, the bottom of the channel-like recess does not "fully" support the rail, as best seen in Fig. 5. Like the Lesley patent, the EP Application uses a settable material, and embeds the rail in the material. It is this filler material that supports the rail, not the bottom of the channel-like recess as in the present invention. In addition, the non-compressible base body of the EP Application is steel, not concrete, as set forth (or ~~receited~~) in independent claim 8 of the present application.

For the foregoing reasons, independent claim 8, as amended, is not anticipated by or rendered obvious over the Ortwein patent, the Lesley patent, and the EP Application. There is no hint or suggestion in any of the references cited by the Examiner to combine these references in a manner which would render the invention as claimed obvious. Reconsideration of the rejections of independent claim 8 is respectfully requested.

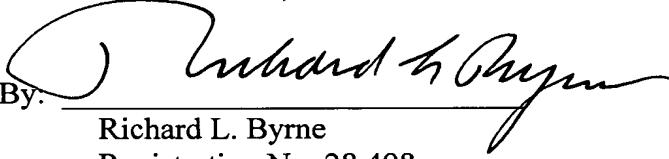
Claims 9-14 depend directly from and add further limitations to independent claim

8 and are deemed to be allowable for the reasons discussed above in connection with independent claim 8. Therefore, for all of the above reasons, reconsideration of the rejections of claims 9-14 is respectfully requested.

For all of the foregoing reasons, Applicant believes that claims 8-14, as amended, are patentable over the cited prior art and in condition for allowance. Reconsideration of the rejections and allowance of all pending claims 8-14 are respectfully requested.

Respectfully submitted,

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MARKED UP AMENDED CLAIMS

8. (Amended) A rail track comprising at least [two parallel rails] one rail supported by a non-compressible, concrete base body, with the base body provided with a channel-like recess for receiving the rail such that [the] a running surface of [the] a head of the received rail lies free, with [the] a bottom of the channel-like recess provided with a first layer of yielding material which extends under [the] a bearing surface of [the] a foot of the rail, [and] with [the] rail side [surface] surfaces between the running surface and the bearing surface of the rail covered with a second layer of yielding material, wherein the bottom of the channel-like recess fully supports the rail and side walls of the channel-like recess are parallel.

11. (Amended) The rail track as claimed in claim 8, wherein the second layer has on [the] one side of the rail a different stiffness than on the other side.